

ABSTRACT

A method of forming an MTJ memory cell and/or an array of such cells is provided wherein each such cell has a small circular horizontal cross-section of 1.0 microns or less in diameter and wherein the ferromagnetic free layer of each such cell has a magnetic anisotropy produced by a magnetic coupling with a thin antiferromagnetic layer that is formed on the free layer. The MTJ memory cell so provided is far less sensitive to shape irregularities and edge defects than cells of the prior art.